

Title (en)
METHOD FOR THE DETERMINATION AND EVALUATION OF PHOTOMETRIC SIGNALS AND DEVICE FOR CARRYING OUT THE METHOD

Publication
EP 0075767 B1 19870902 (DE)

Application
EP 82108382 A 19820911

Priority
DE 3138879 A 19810930

Abstract (en)
[origin: US4553848A] A method and device for detecting and evaluating the optical properties of a specimen, utilizing a light source that has alternating light and dark phases, a detector that picks up light from the light source by way of the specimen being examined, and a circuit that integrates and digitalizes the signals received from the detector, that includes an integrator, and that can be connected to the detector. The signals emitted from the detector are integrated both during at least part of the light phase and during at least part of the dark phase. The integral obtained during the dark phase is subtracted from that obtained during the light phase in order to determine the results. The integrator that is used to integrate the signals is used like an analog-to-digital converter of the double-integration type to convert the integral into a digital signal. To achieve maximum precision and simplicity in the integration and digitalization phase, each part of the light or dark phase is followed by a measurement-voltage period during which the signals coming from the detector are applied in sequence and with opposite mathematical signs to a single integrator. Integration is carried out over a whole number of measurement-voltage periods to form a total integral.

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G01N 21/27; **G01J 1/44**; **G06G 7/186**

IPC 8 full level
G01N 21/17 (2006.01); **G01J 1/16** (2006.01); **G01J 1/44** (2006.01); **G01N 21/27** (2006.01); **G06G 7/186** (2006.01); **H03M 1/00** (2006.01)

CPC (source: EP US)
G01J 1/16 (2013.01 - EP US); **G01N 21/27** (2013.01 - EP US); **H03M 1/52** (2013.01 - EP US)

Citation (examination)
ELEKTRONIK, Nr. 12, 1975 G. STARK "Fotometer für die Absorptionsmessung im Durchlicht" Seiten 65 bis 68

Cited by
US5307145A; US4676653A; DE3535515A1; EP0268660A4; EP0632262A1; DE4321548A1; EP0633457A1; FR2707394A1; US5430290A

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